To Everything There Is a Season: It's Time to Renew the Telecom Ecosystem

F. Duane Ackerman
Chairman and Chief Executive Officer
BellSouth Corporation

I. Introduction

With the telecom sector still stuck in status quo, with the release of the Federal Communications Commission (FCC) Triennial Review Order still pending, and with the nation still on security alert, this is an important time to talk about telecom's ability to invest and innovate for the future. At the core of all the uncertainties, there is one fundamental question: How do we make our industry healthy again?

As I thought about that question and how we got here, I was reminded of an experiment that the media widely reported in the early 1990s. You might remember it, too.

A decade ago, eight researchers sealed themselves in a glass and steel bubble built on the sands of the Arizona desert. Inside, an airtight world had been replicated, along with 4,000 carefully chosen plant and animal species. Called Biosphere 2, the project's aim was to devise a self-sustaining ecosystem in a test tube. In theory, it should have worked.

But time would tell a cautionary tale.

News reports revealed that inside the closed biosphere, oxygen depleted. Noxious gases built up. Crops failed. Many species went extinct, while voracious insects, like the so-called crazy ant, multiplied. Even special intervention like pumping oxygen into the bubble wasn't enough to make the biosphere livable. Two years later, the researchers emerged tired and thin. All the artificial controls and human manipulations could not make this ecosystem viable. The experiment had failed.

I think you see where I'm heading with this.

Telecom has been locked into a glass bubble of its own. Government regulators and their economists thought they had the model right. Theoretically, it should have worked. But we now find the industry is an ecosystem gasping for air—stifled for too long by artificial industry boundaries and stale rules. From a monopoly legacy to the economic regulation of today, public policy has controlled what we grow and breathe, and the relationships we form—all aspects of our existence, from what we charge to who we serve, to how we package these services.

Meanwhile, natural market and technological forces have transformed our industry. Digital convergence is rising. Everyday hundreds of millions of voice and data connections between people and information flow over our networks. Consumers are connecting on more devices at greater speeds than ever before. Communications has become the foundation of much of our innovation and growth, and the reliability of our networks has taken on new relevance in an age of digital viruses and terrorist threats.

Underlying it all is a complex telecom ecosystem of interdependent players and converging technologies. Everyone—equipment manufacturers, carriers, service providers, investors, and policy makers—is a part of it. We are each other's suppliers and customers, and we are competitors. Wireline and wireless, wholesale and retail, and local and long distance are all interconnected. There are a thousand streams of commerce, all dependent on the right mix of

demand, investment, business models, and policies. In this high-fixed cost industry, none of us can operate in isolation. And none of us alone can deliver technology's promise of new and better ways to live and prosper.

Public policy has been trying to keep the lid on the telecom glass bubble. Digital convergence is blowing the lid off. The tension between these forces has brought our ecosystem to the brink of an industry big bang. And the lack of oxygen—the lack of capital in the industry—has only intensified the pressure.

Somewhere between the stagnation of the old ways and the chaos of the new, it is time for us to find a new equilibrium. As technological change marches on, how do we as an industry harness its power for the digital age? How do we get capital flowing into the industry so that we can deliver to our customers critical and innovative communications services?

The telecom ecosystem, as we have known it, is broken. I want to talk about where I see some of the opportunities for renewing it. But first, let's take a deeper look at the dynamics of the system.

II. The Telecom Ecosystem, As We've Known It, Is Broken

The fact is that the state of our stewardship has not kept pace with the state of technology. Why? Because our industry has been shaped according to regulatory assumptions rather than the logic of the marketplace and the dictates of technology.

Let's look at the facts:

- The regulators have assumed that the more competitors the better, without regard to the return on invested capital, and so the ecosystem is swarming with players. In the top 15 U.S. markets, there are at least 15 providers of wireline service. In the Southeast, we have more than 300 competitors. And wireless has at least six carriers in every major market.

- Competition among different technologies has exploded. One in five Americans considers their cell phone their primary phone. Cable broadband subscribers outpace DSL subscribers by almost a 2-to-1 margin, and by 2008 one estimate says cable will have 14 million residential telephony subscribers. There are other forecasts that are even more aggressive. Meanwhile, much of our policy is still focused on a strictly wireline world, with regulators staunchly refusing to recognize the existence, or at least the impact of, intermodal competition.

- Technology is taking us into an "any distance" world, but the industry is still separated along local and long-distance lines.

Based on a 100-year tradition of social pricing in telecom, government controls *retail* wireline prices. And in its zeal to construct…to divine… a competitive ecosystem, regulation didn't stop there. Rather than trusting natural market forces to determine the winners and losers in the marketplace, government also decided to control *wholesale* prices by formula and in doing so encouraged a boom of new species of communications companies regardless of whether they had sound business models.

The rest as they say is history. The boom turned into a bust and killed massive amounts of investment with it—and left an industry with too much capacity and too much regulatory uncertainty.

Between 1996 and 2000, annual capital spending by U.S. telecom carriers, cable operators, and Internet service providers (ISPs) jumped from $42 billion to $113 billion. Since then, capital spending has collapsed back to $41 billion.

The same trend is going on in venture-capital investing. A recent survey showed that venture-capital investments in communications companies dropped from a high of $23 billion in 2000 to $4 billion last year—back to 1998 levels.

Telecom is a high fixed-cost industry. Capital investment is the oxygen we breathe, but layer upon layer of entangled regulation is strangling our capital air hose. Investors have not seen a clear path for getting a return. No return. No capital. And with government controlling both wholesale and retail prices, we can only react to the result, and so far that has meant cutting costs.

The capital squeeze has huge implications for innovation:

- Consumers are still waiting for the full promise of digital convergence—the seamless integration of devices, networks, and services that bring new value to their everyday lives.

- American jobs are moving overseas. Forrester predicts that 3.3 million U.S. services jobs, especially in the IT sector, will move offshore over the next 15 years as companies cut costs. We are seeing engineering jobs beginning to move as well.

- On the broadband front, the Asia-Pacific region now leads in total broadband subscribers with 48% of global DSL lines, followed by North America at 36%. Did you ever believe we would be here?

- And now that the age of Bell Labs is over, how do we fund and drive innovation? In this age of convergence, no *one* company can fund R&D and generate ideas in a closed environment—and nor, I might add, should we. I welcome the shift to more collaborative and open innovation, but we have to change how we manage and fund R&D across the industry.

The future of communications—as well as the future of the economy of this country—depends on our ability to innovate next-generation networks and the products and services that ride on them. And the stakes for investors, consumers, the industry, and, for that matter, the United States have never been higher.

So how do we fix this broken telecom ecosystem?

Let's look at the natural ways one might consider.

III. Renewing the Telecom Ecosystem

A. Rational Public Policy

A rational world would begin by removing the rules that are harming the ecosystem. In other words, deregulate. We must create a more natural climate where commercial agreements, not regulatory mandates, govern relationships. Myopic regulation of the wireline segment, at both the wholesale and retail levels, of both price and service is strangling the whole industry and restraining its ability to evolve. It is dangerous to the ecosystem and the community as a whole.

So we have to keep telling our story that until the telecom is freed from the unnatural glass bubble of regulation, investment, innovation, and the economy will continue to suffer.

But this is not a rational environment, and we can't expect regulation to reform anytime soon. At 100 days and counting, the FCC is still writing the details of a decision it theoretically already made. Policymakers are grinding along at a glacial tempo while the environment is surging forward.

We'll keep working on it—as we say in the South, we'll keep praying over it—but regulatory change always takes more time than we expect.

So beyond fixing the rules, what else is out there?

B. Consolidation and Bankruptcy: Remove Capacity

Another way a rational world might deal with a broken ecosystem is to eliminate the excess capacity depleting the environment. Two natural fixes that are widely talked about are consolidation and bankruptcy—and by the latter I mean bankruptcy where there is actual liquidation rather than the return of the capacity to the market at a lower cost basis.

Comments by Morgan Stanley analyst Simon Flannery are fairly representative. Flannery said, "We believe that the U.S. telecom industry cannot really hope to provide decent returns to investors without a recovery in demand and structural improvement through rationalization and consolidation. […] Bankruptcies of WorldCom, Global Crossing, and others are not eliminating capacity. The industry remains on a path toward increasing commoditization."

In wireless, the case for consolidation is being made even more strongly, with Merrill Lynch noting, "Like many observers, we started 2002 assuming that the competitive intensity of wireless, allied with heavy capital demands, would lead to at least one consolidation among the six nationwide carriers. However, one year later, those expectations have proved totally misplaced."

So there has been a lot of talk about consolidation and bankruptcy as two natural ways for making the ecosystem more rational again. But as much as industry pundits have talked about these fixes, they haven't happened. The excess capacity is still with us.

Now, if we are working on changing the rules and consolidation has yet to happen, are there any other opportunities out there to keep us innovating in a world with limited capital? All of us are telecom stewards, and we have the power to reshape and renew our ecosystem if we find new ways to work and partner with each other.

What does that mean for us?

C. Stronger Partnerships at the Horizontal Levels of the Value Chain

The starting point is for all of us to recognize that telecom is transforming into a new industry structure. We are shifting to a horizontally stratified and open environment. And, combined with the capital pressures, it means that to heal our ecosystem, we all need to rely on each other more than we ever have in the past—and perhaps in ways that we haven't been comfortable with before.

Picture three layers:

1. *Bottom Layer:* Network infrastructure
2. *In the Middle:* The product innovation layer
3. *On Top:* The customer relationship/distribution layer

The major telecom service providers operate at all three horizontal levels of this vertical value chain.

But it's unrealistic to believe that a single carrier can do it all: *One,* provide network services from end to end to all customers, and *two*, develop all the products and applications customers want, and *three*, be the sole, exclusive retail channel to all these customers. That's what many of the largest telecom carriers have tried to do, and they couldn't make it work.

Unregulated industries that have grown and matured naturally have learned lessons that we're just starting to apply in telecom. In an ecosystem, the laws of physics rule. Strong, cooperative relationships are essential to driving the necessary scope, scale, and utilization that creates value throughout the food chain. Partnerships at each horizontal layer are necessary to extend network reach, develop new products and applications, and create new distribution channels. As partners, we're able to produce greater efficiencies without direct capital investment in every layer.

The most competitive industries in the world rely on horizontal relationships. Take Coca-Cola Enterprises as an example. In the early days of bottling, CCE had plants where you could watch through large windows as the machines filled the bottles exclusively with Coke. If you've ever visited the World of Coca-Cola in Atlanta, you've seen a replica of it. After realizing the basics of scale and utilization, they determined that they needed to be more efficient. They covered the windows with bricks and starting bottling other brands. Today, CCE is the #1 soft drink bottler in the world.

Now, if we're honest with each other, the notion that competitors also can be collaborators is still counter-intuitive to our industry. But like other industries before us, we must let go of the mindset that says we can be all things to all customers. Each layer is a different discipline, and we must find new ways of becoming better partners at each horizontal layer.

How might we do that?

Infrastructure Layer – Standards
At the infrastructure layer, we know that we must have interconnection and interoperability while creating a climate for innovation. We can't get there without standards.

Through standards set by Cable Labs, the cable industry moved fast in developing its data over cable service interface specifications (DOCSIS) standards in record time and has gained a competitive edge on its telecom competitors.

The wireless industry in Europe adopted one common standard—Global System for Mobile Communications (GSM)—and wireless services boomed. In the United States, we have four different wireless standards. I wonder what the impact has been on innovation.

We can no longer afford to have different vendors develop incompatible solutions. As we've seen with digital subscriber line (DSL), when we agree to build to the same technical standards across the industry, we can eliminate redundancies, use resources more efficiently, and deploy new technologies faster.

While you could argue that our industry has been more democratic and open in its approach to standards, I think we would all agree that our model lacks the speed of Cable Labs. If we want to win the race against cable, we must move at the speed of business today. We have to move faster—together.

Another problem at the infrastructure layer is the enormous fixed cost required to deploy new network architectures. In telecom, we might explore a "pay by the drink" model, where equipment suppliers provide functionality rather than the hardware itself. The industry could gain some real benefits—a more variabilized cost structure, greater scale advantages, and the ability to control obsolescence periods.

I know that concept might push some comfort zones, but this is about being creative in using capital more efficiently across the industry.

Product Innovation Layer – New Industry Models
At the product innovation layer, the high cost of R&D is a barrier, along with the risk that no single carrier will have the scale to profitably deploy the new product or service. So how does one drive new products and applications with extraordinarily tight capital markets?

Let's think briefly about a different business model. For example, a combination of two or three major carriers, a systems integrator, and a financial company could together develop a product such as voice over Internet protocol (VoIP), make it available through all carriers and all distribution channels, and do so more quickly and efficiently than any single company could have done because of the aggregated demand or scale that can be applied to the development.

These new alliances would represent a shift from the traditional insourced approach to an outsourced, open innovation model, and we see it as a way of financing and driving a wide range of next-generation products and services in a marketplace where capital is a scarce resource.

Some might argue that this is a bad idea because it may complicate a company's ability to differentiate itself. I would counter that the situation we face in our industry should drive us to use common technologies resulting in decreasing costs. We'll differentiate ourselves through our offers, our services, and the unique bundles we provide to our customers, often including components from partner companies.

If you are an equipment manufacturer, differentiating yourself through quality, reliability, and cost is typically more important to BellSouth than a unique feature that you may have implemented in your product.

I encourage you to be creative—to consider concepts like these or similar initiatives of your own. One way or another, now is the time for careful consideration of where your product, and your company, fits in with the new and emerging industry structure. We must be the drivers of technology, applications, and standards, and for now, we must do it with less capital.

Customer Layer – Serving Customers through Partnerships
On the retail services level, it's all about strengthening the relationship with the customer. None of us alone can deliver all of the services or capabilities that customers need. By partnering with allies, we can naturally extend our individual strengths.

BellSouth and Cisco Systems just announced a new strategic relationship to deliver advanced data managed services to business customers in the Southeast. Earlier this year, BellSouth and IBM agreed to collaborate on the delivery of hosting and network services to business customers.

BellSouth has led in customer service for a decade according to the ASCI Survey done by the University of Michigan, but everyday we look at this vast opportunity and we know that there is so much more that can be done, especially with new partnerships and alliances. We've just begun to tap into the possibilities.

Across the industry, we are all exploring many other ideas for evolving our ecosystem. You and I know that there is no one single solution—there is no quick fix. We have to work on all these fronts, from getting the rules right to dealing with the excess capacity—and while we're working on those fronts, we have to find new ways of doing business together.

IV. Conclusion: To Everything There Is a Season

My message is this: The telecom ecosystem as we have known it is broken, but I believe in our industry's ability to evolve, to innovate, and to break through the barriers that are holding us back.

Let's recognize that we are all part of this evolving ecosystem. Let's move with boldness beyond the traditional industry models into news ways of doing business. Let's shatter the glass dome of

irrational regulation. Let's move with speed and focus. And let's keep driving innovation even in our capital-starved world.

Biosphere 2 still stands out in the Arizona desert. Columbia University has been trying to turn it into a research lab to learn from an ecosystem run amok. It stands as a cautionary tale to remind us that nature always has the last word. That's why we have to stop and listen to nature—stop and listen to the logic of our markets and our networks. Because unlike the founders of the Biosphere, we can't just declare this experiment over.

> *To every thing there is a season,*
> *A time to be born, and a time to die;*
> *A time to break down, and a time to build up.*

We are the stewards of a vast telecom ecosystem where everything has its season, and now is the time to build a new and stronger industry.

We must not accept a declining growth curve for our companies or our industry. Regardless of the rules and the disruptive technologies, it is the leaders of this industry that history will hold accountable. We must find the way to evolve our ecosystem, and as we do, we will see new lights of growth for the communication industry in the 21st century.

This keynote address was made on June 3, 2003, at SUPERCOMM 2003 in Atlanta, Georgia.